

## REFERENCES

- Alber, M. and C. Smith. 2001. Water Use Patterns in the Watersheds of the Georgia Riverine Estuaries. In: Proceedings of the 2001 Georgia Water Resources Conference, March 26-27, 2001, University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.
- Allendorf, F. W. and Leary, R. F. 1988. Conservation and Distribution of Genetic Variation in a Polytypic Species, the Cutthroat Trout. *Conservation Biology*, 2: 170–184.
- Armstrong, J. L., and J. E. Hightower. 2002. Potential for restoration of the Roanoke River population of Atlantic sturgeon. *Journal of Applied Ichthyology* 18: 475–480.
- Atlantic States Marine Fisheries Commission (ASMFC). 1998. Amendment 1 to the interstate fishery management plan for Atlantic sturgeon. Management Report No. 31, 43 pp.
- Atlantic States Marine Fisheries Commission (ASMFC). 2005. Proceedings of the Atlantic States Marine Fisheries Commission Atlantic Sturgeon Management Board. ASMFC, November 10, 2004, New Castle, New Hampshire.
- Atlantic States Marine Fisheries Commission (ASMFC). 2007. Estimation of Atlantic Sturgeon Bycatch in Coastal Atlantic Commercial Fisheries of New England and the Mid-Atlantic. Special Report to the ASMFC Atlantic Sturgeon Management Board, August 2007.
- Atlantic States Marine Fisheries Commission (ASMFC). 2009. Atlantic Coast Diadromous Fish Habitat: A Review of Utilization, Threats, Recommendations for Conservation, and Research Needs. Habitat Management Series #9, January 2009.
- Atlantic Sturgeon Status Review Team (ASSRT). 2007. Status review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). Prepared by the ASSRT for the National Marine Fisheries Service, National Oceanic and Atmospheric Administration, July 27, 2007.
- Bain, M. B. 1997. Atlantic and shortnose sturgeons of the Hudson River: Common and Divergent Life History Attributes. *Environmental Biology of Fishes* 48: 347-358.
- Bain, M. B., N. Haley, D. Peterson, J. R. Waldman, and K. Arend. 2000. Harvest and habitats of Atlantic sturgeon *Acipenser oxyrinchus* Mitchell, 1815, in the Hudson River Estuary: Lessons for Sturgeon Conservation. *Instituto Espanol de Oceanografia. Boletin* 16: 43-53.

- Balazik, M. T., G. C. Garman, M. L. Fine, C. H. Hager, and S. P. McIninch. 2010. Changes in age composition and growth characteristics of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) over 400 years. *Biology Letters*, March 17, 2010.
- Baskett, M. L., M. Yoklavich, and M. S. Love. 2006. Predation, competition, and the recovery of overexploited fish stocks in marine reserves *Can. J. Fish. Aquat. Sci.* Vol. 63, pp.1214 – 1229.
- Beamesderfer, R.C.P., and R.A. Farr. 1997. Alternatives for the protection and restoration of sturgeons and their habitat. *Environ. Biol. Fishes* 48:407–417.
- Belovsky, G. E. 1987. Extinction models and mammalian persistence. In M. E. Soulé (editor), *Viable populations for conservation*, p. 35-57. Cambridge Univ. Press, Cambridge.
- Benke, A. C. and C. E. Cushing. 2005. eds., *Rivers of North America*, Elsevier Press, 1148 pp.
- Berry, R. J. 1971. Conservation aspects of the genetical constitution of populations. Pages 177-206 in E. D. Duffey and A. S. Watt, eds. *The Scientific Management of Animal and Plant Communities for Conservation*. Blackwell, Oxford.
- Boreman, J. 1997. Sensitivity of North American sturgeons and paddlefish to fishing mortality. *Environmental Biology of Fishes* 48: 399-405.
- Borodin, N. 1925. Biological observations on the Atlantic Sturgeon, *Acipenser sturio*. *Transactions of the American Fisheries Society* 55: 184-190.
- Bowen, B. W. and J. C. Avise. 1990. Genetic structure of Atlantic and Gulf of Mexico populations of sea bass, menhaden, and sturgeon: Influence of zoogeographic factors and life-history patterns. *Marine Biology* 107: 371-381.
- Brown, J. J., J. Perillo, T. J. Kwak, and R. J. Horwitz. 2005. Implications of *Plyodictis olivaris* (Flathead Catfish) introduction into the Delaware and Susquehanna drainages. *Northeastern Naturalist* 12: 473-484.
- Caron, F., D. Hatin, and R. Fortin. 2002. Biological characteristics of adult Atlantic sturgeon (*Acipenser oxyrinchus*) in the Saint Lawrence River estuary and the effectiveness of management rules. *Journal of Applied Ichthyology* 18: 580-585.
- Chao, A. 1987. Estimating the Population Size for Capture-Recapture Data with Unequal Catchability. *Biometric* 43 (4): 783-791. December 1987.

- Chytalo, K. 1996. Summary of Long Island Sound dredging windows strategy workshop. In: Management of Atlantic Coastal Marine Fish Habitat: Proceedings of a Workshop for Habitat Managers. ASMFC Habitat Management Series #2.
- Collins, M. R., S. G. Rogers, and T. I. J. Smith. 1996. Bycatch of sturgeons along the Southern Atlantic Coast of the USA. North American Journal of Fisheries Management 16: 24-29.
- Collins, M. R. and T. I. J. Smith. 1997. Distribution of shortnose and Atlantic sturgeons in South Carolina. North American Journal of Fisheries Management. 17: 995-1000.
- Collins, M. R., T. I. J. Smith, W. C. Post, and O. Pashuk. 2000. Habitat utilization and biological characteristics of adult Atlantic sturgeon in two South Carolina rivers. Transactions of the American Fisheries Society 129: 982-988.
- Collins, M.R., D. Cooke, B. Post, J. Crane, J. Bulak, T.I.J. Smith, T.W. Greig and J.M. Quattro. 2003. Shortnose sturgeon in the Santee-Cooper reservoir system, South Carolina. Trans. Amer. Fish. Soc. 132(6):1244-1250.
- Congressional Budget Office (CBO). 2006. How Federal Policies Affect the Allocation of Water. August 2006.
- Cooper, K. 1989. Effects of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans on aquatic organisms. Reviews in Aquatic Sciences. 1(2):227-242.
- Crance, J. H. 1987. Habitat suitability index curves for anadromous fishes. In: Common Strategies of Anadromous and Catadromous Fishes, ed. M. J. Dadswell. Bethesda, Maryland, American Fisheries Society. Symposium 1: 554.
- Cummings, R., Brazier, M., Hutchinson, M., and H. Park. 2003. Industrial Water Use/Discharge Statistics. Water Policy Working Paper #2003-009. Georgia Water Planning and Policy Center, Andrew Young School of Policy Studies, Georgia State University, Atlanta, Georgia, May 2003.
- Dadswell, M. 2006. A review of the status of Atlantic sturgeon in Canada, with comparisons to populations in the United States and Europe. Fisheries 31: 218-229.
- Diamond, J.M. 1984. "Normal" extinctions of isolated populations. Pp. 191-246 In: M.H. Nitecki (ed). Extinctions. University of Chicago Press, Chicago.
- Dickerson, D. 2006. Observed takes of sturgeon and turtles from dredging operations along the Atlantic Coast. Supplemental data provided by U.S. Army Engineer R&D Center Environmental Laboratory, Vicksburg, Mississippi.

- Dulvy, N.K. and J.D. Reynolds 2002. Predicting extinction vulnerability in skates. *Conservation Biology*, 16, 440-450.
- Dulvy N.K., Y. Sadovy, and J.D. Reynolds. 2003. Extinction vulnerability in marine populations. *Fish and Fisheries*, 4, 25-64.
- Duncan, W.W., M.C. Freeman, C.A. Jennings, and J.T. McLean. 2003. Considerations for flow alternatives that sustain Savannah River fish populations. *Proceedings of the 2003 Georgia Water Resources Conference*, held April 23-24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.
- Dunton, K.J., A. Jordaan, K.A. McKown, D.O. Conover, and M.G. Frisk. 2010. Abundance and distribution of Atlantic sturgeon (*Acipenser oxyrinchus*) within the Northwest Atlantic Ocean determined from five fishery-independent surveys. *Fish. Bull.* 108:450-465.
- Erickson D. L., A. Kahnle, M. J. Millard, E. A. Mora, M. Bryja, A. Higgs, J. Mohler, M. DuFour, G. Kenney, J. Sweka, and E. K. Pikitch. 2011. Use of pop-up satellite archival tags to identify oceanic-migratory patterns for adult Atlantic Sturgeon, *Acipenser oxyrinchus oxyrinchus* Mitchell, 1815. *J. Appl. Ichthyol.* 27 (2011), 356–365
- Ewens, W. J., P. J. Brockwell, J. M. Gani, and S. I. Resnick. 1987. Minimum viable population size in the presence of catastrophes. In M. E. Soule (editor), *Viable populations for conservation*, p. 59-68. Cambridge Univ. Press, Cambridge.
- Fisher, D. K., Röwer, P., Marsh, C. E., Daniels, J., Ebensperger, U., and S. Roberson. 2003. Coastal River Basins Water Resource Assessment, An Evaluation of Water Use and Availability in Seven Coastal River Basins. Water Policy Working Paper #2003-005. Georgia Water Planning and Policy Center, Georgia Southern University, Daniel Geographic Solutions, May 2003.
- Franklin, I. R. 1980. Evolutionary change in small populations. In M. E. Soule and B. A. Wilcox (editors), *Conservation biology: An evolutionary-ecological perspective*, p. 135-149. Sinauer Assoc., Sunderland, MA.
- Gadomski , D. M. and M. J. Parsley. 2005. Laboratory studies on the vulnerability of young white sturgeon to predation. *North American Journal of Fisheries Management* 25: 667-674.
- Gardmark, A., K. Enberg, J. Ripa, J. Laakso, and V. Kaitala. 2003. The ecology of recovery. *Ann. Zool. Fennici* 40:131-144.
- Georgia Environmental Protection Division (GAEPD). 2001a. Section 3: Water Quantity. In: *Savannah River Basin Watershed Protection Plan*.

Georgia Environmental Protection Division (GAEPD). 2001b. Section 7: Implementation Strategies. In: Ogeechee River Basin Watershed Protection Plan.

Georgia Environmental Protection Division (GAEPD). 2002. Satilla River Basin Watershed Protection Plan. <http://www.gaepd.org/Documents/satilla.html>

Georgia Water Coalition. 2006. Interbasin Transfer Fact Sheet. November 6, 2009. <http://www.garivers.org/gawater/pdf%20files/IBT%20fact%20sheet02-06.pdf>

Gibbons, J. J. and W. C. Post. 2009. Inter-basin transfer, migration, and habitat use by shortnose sturgeon in the lower Santee River and Winyah Bay System, South Carolina. Project #NA06NMF4720044, 1 June 2006 – 31 May 2009. Final Programmatic Report. Prepared for the National Marine Fisheries Service.

Gilbert, C. R. 1989. Atlantic and shortnose sturgeons. United States Department of Interior Biological Report 82: 28 pp.

Gilpin, M. E., and M. E. Soule. 1986. Minimum viable populations: Processes of species extinction. In M. E. Soule (editor), Conservation biology: The science of scarcity and diversity, p. 19-34. Sinauer Assoc., Sunderland, MA, 584 p.

Glasgow, H. B., J. M. Burkholder, M. A. Mallin, N. J. Deamer-Melia, and R. E. Reed. 2001. Field ecology of toxic *Pfiesteria* complex species and a conservative analysis of their role in estuarine fish kills. Environmental Health Perspectives 109: 715-730.

Goodman, D. 1987. Consideration of stochastic demography in the design and management of biological reserves. Nat. Res. Model. 1:205-234.

Grunwald C, Maceda L, Waldman J, Stabile J, Wirgin I. 2008. Conservation of Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus*: delineation of stock structure and distinct population segments. Conservation Genetics 9:1111–1124.

Hanski, I. 1994. A practical model of metapopulation dynamics. Journal of Animal Ecology 63: 151-162.

Hanski, I. and M. Gilpin. 1991. Metapopulation dynamics: brief history and conceptual domain. Biological Journal of the Linnean Society 42: 3-16.

Harrison S. 1994. Metapopulations and conservation. In Large-Scale Ecology and Conservation Biology, ed. PJ Edwards, NR Webb, RM May, Oxford: Blackwell Sci. pp. 111-28.

Heino, M., and Godø, O.R. 2002. Fisheries-induced selection pressures in the context of sustainable fisheries. Bull. Mar. Sci. 70: 639–656.

- Hoff, J. G. 1980. Review of the present status of the stocks of the Atlantic sturgeon *Acipenser oxyrinchus*, Mitchell. Prepared for the National Marine Fisheries Service, Northeast Region, Gloucester, Massachusetts.
- Hutchings, J. A. 2001. Conservation biology of marine fishes: perceptions and caveats regarding assignment of extinction risk. *Can. J. Fish. Aquat. Sci.* 58, 108–121.
- IPCC. 2008. Climate Change and Water. Technical Paper of the IPCC Secretariat. Bates, B.C., Kundzewicz, Z. W., Wu, S., and J.P. Palutikof, editors, Geneva, Switzerland, June 2008.
- Jennings, S., Reynolds, J.D., and Mills, S.C. 1998. Life history correlates of responses to fisheries exploitation. *Proc. R. Soc. Lond. Ser. B Biol. Sci.* 265: 333–339.
- Jordan, F. 2002. Field and laboratory evaluation of habitat use by rainwater killifish (*Lucania parva*) in the Saint Johns river Estuary, Florida. *Estuaries* 25: 288-295.
- Kahn, J. and M. Mohead. 2010. A Protocol for the Use of Shortnose, Atlantics, Gulf, and Green Sturgeons. NOAA Technical Memorandum. NMFS-OPR-45. March 2010.  
[http://www.cio.noaa.gov/Policy\\_Programs/prplans/ID150\\_KahnandMohead2010.pdf](http://www.cio.noaa.gov/Policy_Programs/prplans/ID150_KahnandMohead2010.pdf)
- Kahnle, A. W., K. A. Hattala, K. A. McKown, C. A. Shirey, M. R. Collins, T. S. Squiers, Jr., and T. Savoy. 1998. Stock status of Atlantic sturgeon of Atlantic Coast estuaries. Report for the Atlantic States Marine Fisheries Commission. Draft III.
- Kahnle, A. W., K. A. Hattala, K. McKown. 2007. Status of Atlantic sturgeon of the Hudson River estuary, New York, USA. In J. Munro, D. Hatin, K. McKown, J. Hightower, K. Sulak, A. Kahnle, and F. Caron (editors). Proceedings of the symposium on anadromous sturgeon: Status and trend, anthropogenic impact, and essential habitat. American Fisheries Society, Bethesda, Maryland.
- Kindvall, O. and I. Ahlen. 1992. Geometrical factors and metapopulation dynamics of the brush cricket, *Metrioptera bicolor* Phillipi (Orthoptera: Tettigoniidae). *Conservation Biology* 6: 520-529.
- King, T. L., B. A. Lubinski, and A. P. Spidle. 2001. Microsatellite DNA variation in Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) and cross-species amplification in the Acipenseridae. *Conservation Genetics* 2: 103-119.
- Krieger, J., A. K. Hett, P. A. Fuerst, V. J. Birstein, and A. Ludwig. 2006. Unusual intraindividual variation of the nuclear 18S rDNA gene is widespread within the Acipenseridae. *Journal of Heredity* 97: 218-225.

- Kynard, B. and M. Horgan. 2002. Ontogenetic behavior and migration of Atlantic sturgeon, *Acipenser oxyrinchus oxyrinchus*, and shortnose sturgeon, *A. brevirostrum*, with notes on social behavior. Environmental Behavior of Fishes 63: 137-150.
- Lande, R. 1988. Genetics and demography in biological lconservation. Science 241: 1455-1460.
- Laney, R. W., J. E. Hightower, B. R. Versak, M. F. Mangold, W. W. Cole Jr., and S. E. Winslow. 2007. Distribution, habitat use, and size of Atlantic sturgeon captured during cooperative winter tagging cruises, 1988–2006. In Anadromous sturgeons: habitats, threats, and management (J. Munro, D. Hatin, J. E. Hightower, K. McKown, K. J. Sulak, A. W. Kahnle, and F. Caron, eds.) p. 167–182. Am. Fish. Soc. Symp. 56, Bethesda, MD.
- Leland, J. G., III. 1968. A survey of the sturgeon fishery of South Carolina. Contributed by Bears Bluff Labs. No. 47: 27 pp.
- Levins, R. 1969. Some demographic and genetic consequence of environmental heterogeneity for biological control. Bulletin of the Entomological Society of America. 15: 237-240.
- Lindeman, P. V. 1990. Closed and Open Model Estimates of Abundance and Tests of Model Assumptions for Two Populations of the Turtle, *Chrysemys picta*. Journal of Herpetology, Vol. 24, No. 1, March 1990. pp 78-81.
- Mallin, M. A. and L. B. Cahoon. 2003. Industrialized animal production – a major source of nutrient and microbial pollution to aquatic ecosystems. Population and Environment 24: 369-385.
- Marcy Jr., B. C., D. E. Fletcher, F. D. Martin, M. H. Paller, and M. J. M. Reichert. Fishes of the Middle Savannah River Basin With Emphasis on the Savannah River Site. University of Georgia Press, March 28, 2005. 480 p.
- Massey, M. 2007. Have the South Carolina Water Wars Started? A Lake Hartwell Association Legislative Report.  
[http://www.lakehartwellassociation.org/Portals/0/SC\\_Legislative\\_report\\_summer\\_newsletter.pdf](http://www.lakehartwellassociation.org/Portals/0/SC_Legislative_report_summer_newsletter.pdf)
- McBride, R. S. 2000. Florida's shad and river herring (*Alosa* species): A review of population and fishery characteristics. Florida Marine Research Institute Technical Reports, TR-5. Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL. 18 pages.

- McCord, J. W. 2004. ASMFC Atlantic Sturgeon Plan – amendment 1 South Carolina annual report for calendar-year 2003. Compliance report submitted to Atlantic States Marine Fisheries Commission, October 19, 2004. Washington, DC.
- Moser, M. L. and S. W. Ross. 1995. Habitat use and movements of shortnose and Atlantic sturgeon in the lower Cape Fear River, North Carolina. *Transactions of the American Fisheries Society* 124: 225-234.
- Moser M. L., J. B. Bichy, and S. B. Roberts. 1998. Sturgeon distribution in North Carolina. Center for Marine Science Research. Final Report to U.S. ACOE, Wilmington District, NC.
- Munro, J. and D. Hatin, J. E. Hightower, K. McKown, K. J. Sulak, A. W. Kahnle, and F. Caron, eds. 2007. Anadromous Sturgeon: Habitats, Threats, Management, Synthesis and Summary. American Fisheries Society Symposium, 56: 1-15.
- Murawski, S. A. and A. L. Pacheco. 1977. Biological and fisheries data on Atlantic Sturgeon, *Acipenser oxyrinchus* (Mitchill). National Marine Fisheries Service Technical Series Report 10: 1-69.
- Myers, R. A. and G. Mertz. 1998. The limits of exploitation: a precautionary approach. *Ecol. Applic.* 8, S165–S169.
- Myers R.A., and B. Worm. 2005. Extinction, survival, or recovery of large predatory fishes. *Proceedings of the Royal Society B* 360: 13-20.
- Nichols, J. D. 1992. Capture-Recapture Models: Using marked animals to study population dynamics. *Bioscience*, Vol. 24, No. 2, Feb. 1992. pp 94-102.
- Niklitschek, E.J. and D.H. Secor 2005 Modeling spatial and temporal variation of suitable nursery habitats for Atlantic sturgeon in the Chesapeake Bay. *Estuar. Coast. Shelf Sci.* 64(1):135-148.
- Niklitschek, E. J. and D. H. Secor. 2009a. Dissolved oxygen, temperature and salinity effects on the ecophysiology and survival of juvenile Atlantic sturgeon in estuarine waters: I. Laboratory Results, *Journal of Experimental Marine Biology and Ecology*, Volume 381, Supplement 1, Ecological Impacts of Hypoxia on Living Resources, 1 December 2009, Pages S150-S160.
- Niklitschek, E. J. and D. H. Secor. 2009b. Dissolved oxygen, temperature and salinity effects on the ecophysiology and survival of juvenile Atlantic sturgeon in estuarine waters: II. Model development and testing, *Journal of Experimental Marine Biology and Ecology*, Volume 381, Supplement 1, Ecological Impacts of Hypoxia on Living Resources, 1 December 2009, Pages S161-S172.

National Marine Fisheries Service (NMFS). 2009. The Endangered Species Act Section 6 Program Report. Cooperative Conservation with the States. FY 2003-2008.  
<http://www.nmfs.noaa.gov/pr/pdfs/conservation/section6report.pdf>

National Marine Fisheries Service and United States Fish and Wildlife Service (NMFS and USFWS). 1998. Status review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service and United States Fish and Wildlife Service. 126 pp.

North Carolina Department of Environment and Natural Resources. (NCDENR). 2001a. Division of Water. November 6, 2009. North Carolina State Water Supply Plan.

North Carolina Department of Environment and Natural Resources. (NCDENR). 2001b. Division of Water. November 6, 2009. North Carolina State Water Supply Plan. Basin Summaries: Basin 14 Roanoke River.

North Carolina Department of Environment and Natural Resources (NCDENR). 2006. Water withdrawal registration data query. <http://dwr.ehnrt.state.nc.us/cgi-in/foxweb.exe/c:/foxweb/reg99a>

North Carolina Department of Environment and Natural Resources. (NCDENR). 2009. Division of Water. November 6, 2009. Interbasin Transfer Certification.  
[http://www.ncwater.org/Permits\\_and\\_Registration/Interbasin\\_Transfer/](http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/)

Oakley, N. C. 2003. Status of shortnose sturgeon, *Acipenser brevirostrum*, in the Neuse River, North Carolina. Thesis. Department of Fisheries and Wildlife Science, North Carolina State University, Raleigh, NC.

Ong, T. L., J. Stabile, I. I. Wirgin, and J. R. Waldman. 1996. Genetic divergence between *Acipenser oxyrinchus oxyrinchus* and *A. o. desotoi* as assessed by mitochondrial DNA sequencing analysis. *Copeia* (2): 464-469.

Paerl, H. W., J. L. Pinckney, J. M. Fear, and B. L. Peierls. 1998. Ecosystem responses to internal and watershed organic matter loading: consequences for hypoxia in the eutrophying Neuse River Estuary, North Carolina. *Marine Ecology Progress Series (MEPS)* 166: 17-25.

Peterson, D. L., P. Schueller, R. DeVries, J. Fleming, C. Grunwald, and I. Wirgin. 2008. Annual Run Size and Genetic Characteristics of Atlantic Sturgeon in the Altamaha River, Georgia. *Transactions of the American Fisheries Society* 137:393-401.

Pringle, C. M., M. C. Freeman, and B. J. Freeman. 2000. Regional effects of hydrologic alterations on riverine macrobiota in the New World: Tropical-Temperate

- Comparisons. *Bioscience* 50(9):807-823. American Institute of Biological Sciences.
- Purvis, A., J. L. Gittleman, G. Cowlishaw, and G. M. Mace. 2000. Predicting extinction risk in declining species. *Proc. R. Soc. Lond. B* 267, 1947–1952.
- Qian, S. S., M. E. Borsuk, and C. A. Stow. 2000. Seasonal and long-term nutrient trend decomposition along a spatial gradient in the Neuse River watershed. *Environmental Science and Technology* 34: 4474-4482.
- Quattro, J. M., T. W. Greig, D. K. Coykendall, B. W. Bowen, and J. D. Baldwin. 2002. Genetic issues in aquatic species management: the shortnose sturgeon (*Acipenser brevirostrum*) in the southeastern United States. *Conservation Genetics* 3:155–166.
- Richter, B.D., and G.A. Thomas. 2007. Restoring Environmental Flows by Modifying Dam Operations. *Ecology and Society* (12)(1): 12.
- Rogers, S. G., P. H. Flournoy, and W. Weber. 1994. Status and restoration of Atlantic sturgeon in Georgia. Final report to NMFS for grants NA16FA0098-01, -02, and -03. Rogers, S. G., and W. Weber. 1995. Status and restoration of Atlantic and shortnose sturgeons in Georgia. Final report to NMFS for grant NA46FA102-01.
- Rogers, S. G., and W. Weber. 1995. Status and restoration of Atlantic and shortnose sturgeons in Georgia. Final report to NMFS for grant NA46FA102-01.
- Ruhl, J. B. 2003. Equitable Apportionment of Ecosystem Service: New Water Law for a New Water Age. Delivered at the Florida State University College of Law forum on “The Future of the Apalachicola-Chattahoochee-Flint River System: Legal, Policy, and Scientific Issues”. November 5, 2003.
- Rusert, W., and R. Cummings. 2004. Characteristics of Water-use Control Policies: A Survey of 28 Eastern States. Water Policy Working Paper #2004-001. North Georgia Water Planning and Policy Center, Andrew Young School of Policy Studies, Georgia State University, Atlanta, Georgia, February 2004.
- Salwasser, H., S. P. Mealey, and K. Johnson. 1984. Wildlife population viability: A question of risk. *Trans. N. Am. Nat. Res. Conf.* 49:421-439.
- Schoener, T.W. and D.A. Spiller. 1987. High population persistence in a system with high turnover. *Nature* 330: 474-477.
- Schueller, P. and D. L. Peterson. 2006. Population status and spawning movements of Atlantic sturgeon in the Altamaha River, Georgia. Presentation to the 14th American Fisheries Society Southern Division Meeting, San Antonio, February 8-

- 12th, 2006. Scott, W. B. and E. J. Crossman. 1973. Freshwater fishes of Canada. Fisheries Research Board of Canada Bulletin 184: 966 pp.
- Schueller, P. and D. L. Peterson. 2010. Abundance and Recruitment of Juvenile Atlantic Sturgeon in the Altamaha River, Georgia. Transactions of the American Fisheries Society 139: 1526-1535.
- Scott, W. B. and E. J. Crossman. 1973. Freshwater fishes of Canada. Fisheries Research Board of Canada Bulletin 184: 966 pp.
- Secor, D. H. 1995. Chesapeake Bay Atlantic sturgeon: current status and future recovery. Summary of Findings and Recommendations from a Workshop convened 8 November 1994 at Chesapeake Biological Laboratory. Chesapeake Biological Laboratory, Center for Estuarine and Environmental Studies, University of Maryland System, Solomons, Maryland.
- Secor, D. H. 2002. Atlantic sturgeon fisheries and stock abundances during the late nineteenth century. American Fisheries Society Symposium 28: 89-98.
- Secor, D. H., and T. E. Gunderson. 1998. Effects of hypoxia and temperature on survival, growth, and respiration of juvenile Atlantic sturgeon, *Acipenser oxyrinchus*. Fishery Bulletin 96:603-613.
- Secor, D. H. and J. R. Waldman. 1999. Historical abundance of Delaware Bay Atlantic sturgeon and potential rate of recovery. American Fisheries Society Symposium 23: 203- 216.
- Shaffer, M. L. 1981. Minimum Population Sizes for Species Conservation. BioScience Vol. 31, No. 2 (Feb., 1981), pp. 131-134.
- Simberloff, D. 1988. The contribution of population and community biology to conservation science. Ann. Rev. Ecol. Syst. 19:473-511.
- Sindermann, C. J. 1994. Quantitative effects of pollution on marine and anadromous fish populations. NOAA Technical Memorandum NMFS-F/NMFS-104, National Marine Fisheries Service, Woods Hole, Massachusetts.
- Smith, T. I. J. 1985. The fishery, biology, and management of Atlantic sturgeon, *Acipenser oxyrhynchus*, in North America. Environmental Biology of Fishes 14(1): 61-72.
- Smith, T. I. J., E. K. Dingley, and E.E. Marchette. 1980. Induced spawning and culture of Atlantic sturgeon. Progressive Fish Culturist 42: 147-151.

- Smith, T. I. J., E. K. Dingley, and D. E. Marchette. 1981. Culture trials with Atlantic sturgeon, *Acipenser oxyrinchus*, in the U.S.A. Journal of World Mariculture Society 12: 78-87.
- Smith, T. I. J., D. E. Marchette and R. A. Smiley. 1982. Life history, ecology, culture and management of Atlantic sturgeon, *Acipenser oxyrinchus oxyrinchus*, Mitchell, in South Carolina. South Carolina Wildlife Marine Resources. Resources Department, Final Report to U.S. Fish and Wildlife Service Project AFS-9. 75 pp.
- Smith, T. I.J. and E. K. Dingley. 1984. Review of biology and culture of Atlantic (*Acipenser oxyrinchus*) and shortnose sturgeon (*A. brevirostrum*). Journal of World Mariculture Society 15: 210-218.
- Smith, T. I. J., D. E. Marchette and G.E. Ulrich. 1984. The Atlantic sturgeon fishery in South Carolina. North American Journal of Fisheries Management 4:164-176.
- Smith, T. I. J. and J. P. Clugston. 1997. Status and management of Atlantic sturgeon, *Acipenser oxyrinchus*, in North America. Environmental Biology of Fishes 48: 335-346.
- Soule, M. E. 1980. Thresholds for survival: maintaining fitness and evolutionary potential. Pages 151-170 in M. E. Soule and B. A. Wilcox, eds. Conservation Biology: An Evolutionary-Ecological Perspective. Sinauer, Sunderland, MA.
- Soule, M.E. 1986. Conservation biology: the science of scarcity and diversity. Sinauer Associates, Sunderland, Massachusetts.
- Soule, M. E., and D. Simberloff. 1986. What do genetics and ecology tell us about the design of nature reserves? Biol. Conserv. 35:19-40.
- Soule, M. E. 1987. Where do we go from here? In M. E. Soule (editor), Viable populations for conservation, p. 175-183. Cambridge Univ. Press, Cambridge.
- South Carolina Department of Natural Resources (SCDNR). 2009. South Carolina Water Assessment. Chapter 6: Watershed Conditions: Santee River Basin.  
[http://www.dnr.sc.gov/water/hydro/HydroPubs/assessment/SCWA\\_Ch\\_6.pdf](http://www.dnr.sc.gov/water/hydro/HydroPubs/assessment/SCWA_Ch_6.pdf)
- South Carolina State Climatology Office. 2008. South Carolina Drought Status By County, October 28, 2008.  
[http://www.dnr.sc.gov/climate/sco/Drought/drought\\_current\\_info.php](http://www.dnr.sc.gov/climate/sco/Drought/drought_current_info.php)
- Spencer, D., and L. B. Muzekari. 2002. Source Water Assessment Plans Across State Lines (Beaufort Jasper Water & Sewer Authority and the City of Savannah. Presented at the 2002 South Carolina Environmental Conference.

- Stein, A. B., K. D. Friedland, and M. Sutherland. 2004a. Atlantic sturgeon marine distribution and habitat use along the northeastern coast of the United States. *Transactions of the American Fisheries Society* 133: 527-537.
- Stein, A. B., K. D. Friedland, and M. Sutherland. 2004b. Atlantic sturgeon marine bycatch and mortality on the continental shelf of the Northeast United States. *North American Journal of Fisheries Management* 24: 171-183.
- Stevenson, J. T., and D. H. Secor. 1999. Age determination and growth of Hudson River Atlantic sturgeon, *Acipenser oxyrinchus*. *Fishery Bulletin* 97: 153-166.
- Sumner, Jr. H. L. 2004. Edwin I. Hatch, units 1 and 2 – update the Hatch biological assessment under the Endangered Species Act for shortnose sturgeon. Southern Nuclear Operating Company, Docket Nos.: 50-321.
- Thomas, C. D. 1990. What do real population dynamics tell us about minimum viable population sizes? *Conserv. Biol.* 4:324-327.
- Thomas, C.D. 1994. Extinction, colonization, and metapopulations: environmental tracking by rare species. *Conservation Biology* 8: 373-378.
- Thompson, G. G. 1991. Determining minimum viable populations under the Endangered Species Act. US Department of Commerce NOAA Technical Memorandum NMFS F/NWC-198, 78 pp.
- U.S. Environmental Protection Agency (USEPA). 2008. National Coastal Condition Report (NCCR) III. <http://water.epa.gov/type/oceb/assessmonitor/nccr/index.cfm>
- U.S. Fish and Wildlife Service (USFWS). 2003. Draft Fish and Wildlife Coordination Act Report on the Savannah River Basin Comprehensive Study. October 2003. <http://www.rivercenter.uga.edu/publications/pdf/fwcareport.pdf>
- U.S. Geological Survey (USGS). 2000. Droughts in Georgia. Open-File Report 00-380. October 2000.
- U.S. Geological Survey (USGS). 2007. Drought Worsens for September with Many Streams Setting New Record Lows. Prepared by the Georgia Water Science Center, September 2007.
- U.S. Global Research Group. 2004. U.S. National Assessment of the Potential Consequences of Climate Variability and Change, Regional Paper: The Southeast. Washington, D.C., August 20, 2004. November 13, 2006. <http://www.usgcrp.gov/usgcrp/nacc/education/southeast/se-edu-2.htm>

University of Georgia (UGA). 2002. Reservoirs in Georgia: Meeting Water Supply Needs While Minimizing Impacts. River Basin Policy and Science Center. May 2002.

Van Eenennaam, J. P., S. I. Doroshov, G. P. Moberg, J. G. Watson, D. S. Moore and J. Linares. 1996. Reproductive conditions of the Atlantic sturgeon (*Acipenser oxyrinchus*) in the Hudson River. *Estuaries* 19: 769-777.

Van Eenennaam, J. P., and S. I. Doroshov. 1998. Effects of age and body size on gonadal development of Atlantic sturgeon. *Journal of Fish Biology* 53: 624-637.

Vladykov, V. D. and J. R. Greely. 1963. Order Acipenseroidei. In: *Fishes of Western North Atlantic*. Sears Foundation. Marine Research, Yale Univ. 1 630 pp.

Waldman, J. R., J. T. Hart, and I. I. Wirgin. 1996a. Stock composition of the New York Bight Atlantic sturgeon fishery based on analysis of mitochondrial DNA. *Transactions of the American Fisheries Society* 125: 364-371.

Waldman, J. R., K. Nolan, J. Hart, and I. I. Wirgin. 1996b. Genetic differentiation of three key anadromous fish populations of the Hudson River. *Estuaries* 19: 759-768.

Waldman, J. R., and I. I. Wirgin. 1998. Status and restoration options for Atlantic sturgeon in North America. *Conservation Biology* 12: 631-638.

Waldman, J. R., C. Grunwald, J. Stabile, and I. Wirgin. 2002. Impacts of life history and biogeography on the genetic stock structure of Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus*, Gulf sturgeon *A. oxyrinchus desotoi*, and shortnose sturgeon *A. brevirostrum*. *Journal of Applied Ichthyology* 18: 509-518.

Weber, W. and C. A. Jennings. 1996. Endangered species management plan for the shortnose sturgeon, *Acipenser brevirostrum*. Final Report to Port Stewart Military Reservation, Fort Stewart, GA.

White, R. R., and J. L. Armstrong. 2000. Survival of Atlantic sturgeon captured by flounder gillnets in Albemarle Sound. Final Report to North Carolina Marine Fisheries Commission, Fishery Resource Grant Program: 98FEG-39.

Williams, M. S., and T. E. Lankford. 2003. Fisheries studies in the lower Cape Fear River system, June 2002 – 2003. Pages 116 – 169 in Environmental Assessment of the Lower Cape Fear River System 2002- 2003. M. M. Mallin, M. R. McIver, H. A. Wells, M. S. Williams, T. E. Lankford, and J. F. Merritt (eds). Center for Marine Science Report 03- 03, University of North Carolina at Wilmington, NC.

Williamson, M. 1981. Island populations. Oxford University Press, Oxford.

- Winger, P. V., P. J. Lasier, D. H. White, J. T. Seginak. 2000. Effects of contaminants in dredge material from the lower Savannah River. *Archives of Environmental Contamination and Toxicology* 38: 128-136.
- Wirgin, I., J. R. Waldman, J. Rosko, R. Gross, M. Collins, S. G. Rogers, and J. Stabile. 2000. Genetic structure of Atlantic sturgeon populations based on mitochondrial DNA control region sequences. *Transactions of the American Fisheries Society* 129: 476-486.
- Wirgin, I., J. Waldman, J. Stabile, B. Lubinski, and T. King. 2002. Comparison of mitochondrial DNA control region sequence and microsatellite DNA analyses in estimating population structure and gene flow rates in Atlantic sturgeon *Acipenser oxyrinchus*. *Journal of Applied Ichthyology* 18: 313-319.
- Wirgin, I., C. Grunwald, E. Carlson, J. Stabile, D.L. Peterson, J. Waldman. 2005. Range-wide population structure of shortnose sturgeon, *Acipenser brevirostrum*, based on sequence analysis of the mitochondrial DNA control region. *Estuaries*. Vol. 28, 3:406-421.
- Wirgin, I., and T. King. 2006. Supplemental genetics sampling data submitted to the Atlantic Sturgeon Status Review Team.
- Wright, S. 1931. Evolution in Mendelian populations. *Genetics* 16:97-159.
- Wrona, A., D. Wear, J. Ward, R. Sharitz, J. Rosenzweig, J. P. Richardson, D. Peterson, S. Leach, L. Lee, C. R. Jackson, J. Gordon, M. Freeman, O. Flite, G. Eidson, M. Davis, and D. Batzer. 2007. Restoring Ecological Flows to the Lower Savannah River: A Collaborative Scientific Approach to Adaptive Management. Proceedings of the 2007 Georgia Water Resources Conference, held March 27–29, 2007, at the University of Georgia.
- Young, J. R., T. B. Hoff, W. P. Dey, and J. G. Hoff. 1988. Management recommendations for a Hudson River Atlantic sturgeon fishery based on an age-structured population model. *Fisheries Research in the Hudson River*. State of University of New York Press, Albany, New York. pp. 353.